

1 *The NDCamera application*

NDCameraRunning.tiff ↗

This is a NeXTdimension based auto frame grabber which might help you to create NeXTIME movies or other image sequences.

It follows the tradition of Icon.app, DVR.app and Capture.app which have been written some time ago but seem to be not supported anymore. NDCamera was developed under NeXTSTEP 3.3, always keeps only one frame in memory and allows resizing of the image before saving it to your disk.

Use it with patience because the NeXTdimension's software is buggy!

What it does

It grabs images. Now that is basically all this app will do for you. Besides that it allows

you to create *.anim* movies. Every frame is titled, numbered and stored as a Tiff file inside a specified directory.

So you can use the app in different ways. Either as a "small, rarely updated" monitor or as a "single frame once a while" camera.

When creating movies you can choose to record each frame by hand or use the continuous time-based grab feature. Whenever the frame count increase you have a short period of time to switch to the next frame. Some VCRs can even be set up to play a movie in slow motion. Thus synchronizing the VCR with the grabbing speed on the NDCamera could allow you to record long movie automatically.

Still there are some problems with automatic recording. Sometimes it happens that the VCR switches to another frame while the ND is grabbing. This will cause bad image quality because the ND now might grab two subsequent video frames which will cause smear effects if the actors are moving fast.

Resizing is also a none trivial aspect. Under certain size factors you will get a funny stripe pattern due to the interlaced frames.

The NeXTcube is also a little slow at processing the single frames. Thats why for big images you won't even reach a rate of 1 fps. With fps rates turning to random (due to calculation delays) you will have a hard time to sync you VCR at all^{1/4}so the savest way to advance the video tape is using the remote control and single frame stepping. But you might also choose the change the frame base rate (see the *Release Notes* for details).

Syncing can be quite easy if you have a way to control the VCR by your computer. Then you can use the included commandline example which causes the NDCamera to grab a single frame by using distributed objects.

The Package

Version 0.21 comes in a package that includes:

- NDCamera.app for NeXT hardware only. You need a NeXTdimension to use this app successfully.
- An *Examples* directory containing a simple movie recorded using this app and a cheap video player plus two applications which allow show you how to do remote controlling of the NDCamera.
- Online help...minimal
- Full sourcecode
- The documentation and an ASCII version (README) of this introduction

Attention: You need gnutar and gzip und unpack those files. Both programs come bundled with NeXTSTEP since version 3.2.

On where to find the latest releases please see the '*About this Project*' section.

Features

As a fun project this app does nothing special. After all some people might find it useful to create their private movies. The included example was created using the NeXTdimension and a cheap video player. Somehow the Dimension failed to grab certain frames which makes the movie a little un-smooth. This was most likely due to the fact that even one frame/sec was too much work and the poor Cube couldn't keep up with the input.

If you want to record movies automatically you might enlarge the time between timed entries (see above).

Here is what the app can do in the current stage:

- Choose a video source and adjust its settings.
- Grab single frames on a timed basis.
- Scale the grabbed images and display them on the screen or save them to a *.anim* file.

Some features will definitely be improved over time but there is definitely more useful work out here (if you have a desperate need for some features let me know anyhow).

Attention: The implementation of the NeXTdimension's software is a little buggy. Running at high frame rates or with a huge system load will most probably crash the WindowServer. Don't say you haven't been warned.

For a complete description of known bugs see the *Release Notes* in the second chapter.

About this Project

Once the NeXTIME framework is documented (or I had the time to figure out some APIs on my own) I would like to include support for other output options. This could be just other file formats or even using the NDCamera as a NeXTIME video source. Time will tell but it will never be much more than an app to play with. The performance of the system is not high enough to allow realtime video grabbing. You definitely need

some extra hardware for such a job¹/₄or some really fast machines.

The latest version of this application will be available at the ftp.nmr.embl-heidelberg.de, ftp.informatik.uni-muenchen.de or ftp.cs.orst.edu anonymous ftp servers. There is a WWW page were you can find out more about the status of this¹/₄and all the other projects I'm working on:

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http://wwwcip.informatik.uni-erlangen.de/user/tsengel/Projects/Projects.html
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Compiling

This version includes all the source code necessary to recompile the program from scratch. It does **not** come with all the libraries! You might need to get the MiscKit project (Version 1.4.0 or higher) from the archives.

For more details on the MiscKit collection see the common NeXT ftp servers, get the Objective-C or NeXT FAQs or take a look at the EduSteps developer area:

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http://www.nmr.embl-heidelberg.de/eduStep/Developer/Kits/MiscKit/MiscKit.html
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If you would like to submit something to this collection you should contact the current maintainer: Don Yacktman <Don_Yacktman@byu.edu>

In Case of Trouble

If you have any questions you can contact me.

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(NeXTMail welcome)

Warranty and copyright

Copyleft

All source code is distributed under the GNU General Public License.

This does not apply to the ObjectWare used, which most likely comes with its own licensing rules (e.g. code that belongs to the MiscKit project).

You are free to extend and modify this application. But don't redistribute a modified version under the same name unless I gave you the permission.

I don't want to have different, confusingly incompatible versions running around the world.

Anyway^{1/4}comments are *highly* appreciated.

No Warranty

This software is provided 'as is' and the programmer is not responsible for any harm this program may cause.

You & the user & are responsible for everything that may happen to your business, hardware, software, car, CD collection or what ever may be worth your attention or money.

Using this product is at your own risk and your private fun.

There should be no serious bugs inside but remember that a carbon-based unit did the coding.

Travelware

Like all my projects this app is free and should be considered as travelware.

539449_12ptHevBlk.tiff → Let it travel to as many people as you know.

721935_12ptHevBlk.tiff → Send me an E-mail or postcard if you use it. I will try to keep you informed about new releases.

872937_12ptHevBlk.tiff → If you have a free bed or some free space on your floor^{1/4} give me a hint. I might come and visit you on my next trip to the US^{1/4} locations on Hawaii, near Seattle or WhistlerMnt. (Canada) preferred.

Enjoy it.

.Unterschrift.tiff →